## Class–VI (CHAPTER-01) FOOD: WHERE DOES IT COME FROM?

### Questions

1. Do you find that all living beings need the same kind of food?
2. Name five plants and their parts that we eat.
3. Match the items given in column A with that in column B.

| Column A | Column B |
|---|---|
| (a) Milk, curd, paneer, ghee | (i) Eat other animals |
| (b) Spinach, cauliflower, carrot | (ii) Eat plants and plant products. |
| (c) Lion and tiger | (iii) Are vegetables |
| (d) Herbivores | (iv) Are all animal products. |

4. Fill up the blanks with the words given:

   Herbivore, plant, milk, sugarcane, carnivore.

   (a) Tiger is a ---------- because it eats only meat.

   (b) Deer eats only plants products and so, is called ----------.

   (c) Parrot eats only ---------- products.

   (d) The --------- that we drink comes from cows, buffaloes and goats is an animal product.

   (e) We get sugar from ----------.

## Class–VI (CHAPTER-01) FOOD: WHERE DOES IT COME FROM?

**Answers**

1. No, all living beings do not need the same kind of food. Some animals eat only plant products called as herbivores. Some animals eat only other animals. They are called carnivores. Some other animals eat both plants and animals called omnivores.

2. (a) Apple tree Fruit.
   (b) Wheat plant Seed
   (c) Potato plant Stem
   (d) Beetroot plant Root
   (e) Spinach Leaves

3.

| Column A | Column B |
|---|---|
| (a) Milk, curd, paneer, ghee | (iv) are all animal products. |
| (b) Spinach, cauliflower, carrot | (iii) are vegetables. |
| (c) Lion and tiger | (i) eat animals. |
| (d) Herbivores | (ii) eat plants and plant products. |

4. Fill up the blanks with the words given:
   (a) Tiger is a **carnivore** because it eats only meat.
   (b) Deer eats only plants products and so, is called **herbivores**.
   (c) Parrot eats only **plant** products.
   (d) The **milk** that we drink comes from cows, buffaloes and goats is an animal product.
   (e) We get sugar from **sugarcane**.

## Class–VI (CHAPTER-02) COMPONENTS OF FOOD

### Questions

1. Name the major nutrients in our food.
2. Name the following:
   (a) The nutrients which mainly give energy to our body.
   (b) The nutrients that are needed for the growth and maintenance of our body.
   (c) A vitamin required for maintaining good eyesight.
   (d) A mineral that is required for keeping our bones healthy.
3. Name the two foods each rich in
   (a) Starch
   (b) Starch
   (c) Dietary fibre
   (d) Protein
4. Tick (√) the statements that are correct.
   (a) By eating rice alone, we can fulfill nutritional requirement of our body.
   (b) Deficiency diseases can be prevented by eating a variety of food items.
   (c) Balanced diet for the body should contain a variety of food items.
   (d) Meat alone is not sufficient to provide all nutrients to the body.
5. Fill in the blanks.
   (a) --------- is caused by deficiency of vitamin D.
   (b) Deficiency of ---------- causes a disease known as beri-beri.
   (c) Deficiency of vitamin C causes disease known as ----------.
   (d) Night blindness is caused due to deficiency of ---------- in our food.

## Class–VI (CHAPTER-02) COMPONENTS OF FOOD

### Answers

1. The major nutrients in our food are carbohydrates, proteins, fats, vitamins and minerals. In addition, food also contains dietary fibres and water.

2. Name the following:
   (a) Carbohydrates and fats.
   (b) Proteins and minerals
   (c) Vitamin A
   (d) Calcium

3. (a) Butter, Groundnut.
   (b) Rice, Potato.
   (c) Whole grains, Fresh fruits.
   (d) Pulses, Fish.

4. Tick (√) the statements that are correct.
   (a) By eating rice alone, we can fulfill nutritional requirement of our body.
   (b) Deficiency diseases can be prevented by eating a variety of food items. √
   (c) Balanced diet for the body should contain a variety of food items. √
   (d) Meat alone is not sufficient to provide all nutrients to the body. √

5. Fill in the blanks.
   (a) **Rickets** is caused by deficiency of vitamin D.
   (b) Deficiency of **vitamin $B_1$** causes a disease known as beri-beri.
   (c) Deficiency of vitamin C causes disease known as **scurvy**.
   (d) Night blindness is caused due to deficiency of **vitamin A** in our food.

## Class–VI (CHAPTER-03) FIBRE TO FABRIC

### Questions

1. Classify the following fibres as neutral or synthetic:
   Nylon, wool, silk, polyester, jute.
2. State whether the following statements are true or false:
   (a) Yarn is made from fibres. (T/F).
   (b) Spinning is a process of making fibres. (T/F).
   (c) Jute is outer covering of coconut.
   (d) The process of removing seed from cotton is called ginning. (T/F).
   (e) Weaving of yarn makes a piece of fabric (T/F).
   (f) Silk fibre is obtained from the stem of a plant. (T/F).
3. Fill in the blanks:
   (a) Plant fibres are obtained from ---------- and ----------.
   (b) Animal fibres are ---------- and ----------.
4. From which parts of the plant cotton and jute are obtained?
5. Name two items that are made from coconut fibre.
6. Explain the process of making yarn from fibre.

## Class–VI (CHAPTER-03) FIBRE TO FABRIC

### Answers

1.

| Natural fibres | Synthetic fibre |
|---|---|
| Wool | Nylon |
| Cotton | Polyester |
| Silk | |
| Jute | |

2. (a) T.
   (b) F
   (c) F
   (d) T
   (e) T
   (f) F
   (g) F
3. (a) Plants fibres are obtained from **cotton** and **jute**.
   (b) Animals fibres are **silk** and **wool**.
4. Cotton – From fruit of the cotton plant.
   Jute – From stem of jute plant.
5. (i) Bags
   (ii) Rope.
6. The process of making yarn from fibres is called spinning. In this process, fibres from a mass of cotton were drawn out and twisted. This brings the fibres together to form a yarn.

## Class–VI (CHAPTER-04) SORTING MATERIALS INTO GROUPS

**Questions**

1. Name five objects which can be made from wood.
2. Select those objects from the following which shine:
   Steel, Spoon, Glass bowl.
3. Match the objects given below with the materials from which they could be made. Remember, an object could be made from more than one material and given material could be used for making many objects.

| Objects | Materials |
|---|---|
| Book | Glass |
| Tumbler | Wood |
| Chair | Paper |
| Toy | Leather |
| Shoes | Plastics |

4. State whether the statements given below are true or false:
   (i) Stone is transparent, while glass is opaque. (T/F).
   (ii) A note book has lustre while eraser does not. (T/F)
   (iii) Chalk dissolves in water. (T/F)
   (iv) A piece of wood floats on water. (T/F)
   (v) Sugar does not dissolve in water. (T/F)
   (vi) Oil mixes with water. (T/F)
   (vii) Sand settles down in water. (T/F)
   (viii) Vinegar dissolves in water. (T/F).
5. Given below are the names of some objects and materials:
   Water, basketball, orange, sugar, globe, apple, and earthen pitcher. Group them as :
   (a) Round shaped and other shaped
   (b) Eatables and non-eatables.
6. List all items known to you that float on water. Check and see if they will float on oil or kerosene.
7. Find the odd one out from the following:
   (a) Chair, Bed, Table, Baby, Cupboard.
   (b) Rose, Jasmine, Boat, Marigold, Lotus.
   (c) Aluminium, Iron, Copper, Silver, Sand.
   (d) Sugar, Salt, Sand, Milk, Milk powder.

## Class–VI (CHAPTER-04) SORTING MATERIALS INTO GROUPS

**Answers**

1. Objects made from wood:
   (i) Table
   (ii) Chair
   (iii) Spoon
   (iv) Door
   (v) Box
2. The objects which shine from the following are:
   (i) Steel spoon
   (ii) Glass bowl.
3.

| Objects | Materials |
|---|---|
| Book | Paper |
| Tumbler | Glass, wood, plastic |
| Chair | Wood, plastic |
| Toy | Glass, wood, paper, leather, plastic |
| Shoes | Leather, plastic. |

4. True/ False
   (i) F
   (ii) F
   (iii) F
   (iv) T
   (v) F
   (vi) F
   (vii) T
   (viii) T

5.

| Round shaped | Other shaped | Eatable | Non-eatable |
|---|---|---|---|
| Basketball<br>Orange<br>Globe<br>Earthen pot | Apple | Water<br>Orange<br>Sugar<br>Apple | Basketball<br>Globe<br>Earthen pitcher |

6. Items that float on water include:
   (i) Plastic ball
   (ii) Balloon
   (iii) Feather
   (iv) Matchstick
   (v) Wood
   (vi) Thermocole
   (vii) Cane
   (viii) Boat
   (ix) Hair

   They also float on oil or kerosene.
7. (a) Baby
   (b) Boat
   (c) Sand
   (d) Sand

## Class–VI (CHAPTER-05) SEPARATION OF SUBSTANCES

### Questions

1. Why do we need to separate different component of mixture? Give two examples.
2. What is winnowing? Where is it used?
3. How will you separate husk or dirt particles form a given sample of pulses before cooking?
4. What is sieving? Where is it used?
5. How will you separate sand and water from their mixture?
6. Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?
7. How would you obtain clear water from a sample of muddy water?
8. Fill up the blanks:
   (a) The method of separating seeds of paddy from its stalks is called ----------.
   (b) When milk, cooled after boiling, is poured on to a piece of cloth the cream is left behind on it. This process of separating cream from milk is an example of --------.
   (c) Salt is obtained from seawater by process of ----------.
   (d) Impurities settled at the bottom when muddy water was kept overnight in a bucket. The clear water was then poured off from the top. The process of separation used in this example is called ----------.
9. True/False.
   (a) A mixture of milk and water can be separated by filtration. (T/F)
   (b) A mixture of powdered salt and sugar can be separated by the process of winnowing. (T/F)
   (c) Separation of sugar from tea can be done with filtration. (T/F)
   (d) Grain and husk can be separated with the process of decantation. (T/F)
10. Lemonade is prepared by mixing lemon juice and sugar in water. You wish to add ice to cool it. Should you add ice to the lemonade before or after dissolving sugar? In which case would be possible to dissolve more sugar?

## Class–VI (CHAPTER-05) SEPARATION OF SUBSTANCES

### Answers

1. When two or more substances are mixed together we call it a mixture. Sometimes, different components of mixture are not useful or may even harmful. So, we need to separate different components of the mixture.
2. Winnowing is used to separate heavier and lighter components of mixture by wind or by blowing air.
   This method is commonly used by farmers to separate lighter husk particles from heavier seeds grain.
3. Husk or dirt particles form pulses are separated by handpicking.
   The method of handpicking is normally used for separating slightly larger size impurities like piece of dirt, stone, husk form wheat, rice or pulses.
4. Sieving allows fine particles to pass through the holes of the sieve,
   In flour mills, impurities like husk and stones are removed from wheat by sieving.
5. Steps of separating sand from water:
   (i) Allow mixture to stand in a glass.
   (ii) Sand settles at the bottom.
   (iii) Clear water forms at upper layer.
   (iv) Gently pour this water in another glass.
6. Yes, it is possible to separate sugar with wheat flour.
   (i) Mix sugar and wheat flour in lot of water.
   (ii) Filter it.
   (iii) On the filter paper is wheat flour.
   (iv) Dry it get wheat flour.
   (v) Filtrate is a sugar-water mixture.
   (vi) Evaporate this to get sugar.
7. Method of obtaining clear water from a muddy water:
   (i) Allow muddy water to stand.
   (ii) Mud settles at the bottom.
   (iii) Upper layer is clear water.

(iv) Decant it.

(v) Then filter this water again to remove traces of mud particles.

8. Fill up the blanks:

(a) The method of separating seeds of paddy from its stalks is called **threshing**.

(b) When milk, cooled after boiling, is poured on to a piece of cloth the cream is left behind on it. This process of separating cream from milk is an example of f**iltration**.

(c) Salt is obtained from seawater by process of **evaporation**.

(d) Impurities settled at the bottom when muddy water was kept overnight in a bucket. The clear water was then poured off from the top. The process of separation used in this example is called **decantation**.

9. True/false

(a) F

(b) F

(c) T

(d) F

10. We should add ice to the lemonade after dissolving sugar.

It will be possible to add more sugar before adding ice.

## Class–VI (CHAPTER-06) CHANGES AROUND US

### Questions

1. To walk through a waterlogged area, you usually shorten the length of your dress by folding it. Can this change be reversed?
2. You accidently dropped your favorite toy and broke it. This is a change you did not want. Can this change be reversed?
3. Some changes are listed in the following table. For each change, write in the blank column whether the change can be reversed or not.

| S.No. | Change | Can be reversed Yes/No |
|---|---|---|
| 1. | The sawing of a piece of wood. | |
| 2. | The melting of ice candy | |
| 3. | Dissolving sugar in water | |
| 4. | The cooking of food | |
| 5. | The ripening of mango | |
| 6. | Souring of milk | |

4. A drawing sheet changes when you draw a picture on it. Can you reverse this change?
5. Give example to explain the difference between changes that can or cannot be reversed.
6. A thick coating of paste of Plaster of Paris is applied over the bandage on a fractured bone. It becomes hard on drying to keep the fractured bone immobilized. Can the change in POP be reversed?
7. A bag of cement lying in the open gets wet due to rain during night. The next day the sun shines brightly. Do you think the change which have occurred in the cement could be reversed?

## Class–VI (CHAPTER-06) CHANGES AROUND US

**Answers**

1. Yes, this can be reversed.
2. No, this change cannot be reversed.
3.

| S.No. | Change | Can be reversed Yes/No |
|---|---|---|
| 1. | The sawing of a piece of wood. | No |
| 2. | The melting of ice candy | Yes |
| 3. | Dissolving sugar in water | Yes |
| 4. | The cooking of food | No |
| 5. | The ripening of mango | No |
| 6. | Souring of milk | No |

4. If the picture is drawn with a pencil, then it can be erased; hence change can be reversed. But if the picture is drawn with colours, the change cannot be reversed.
5. Some changes can be reversed like:
   (i) Filing glass with water
   (ii) Opening/ closing door

   Other changes cannot be reversed, like:
   (i) Curdling of milk
   (ii) Ripening of fruit.
6. No, the change in plaster of Paris cannot be reversed.
7. No, the changes which have occurred in the cement cannot be reversed.

## Class–VI (CHAPTER-07) Getting to Know Plants

### Questions

1. Correct the following statements and rewrite them in your notebook.
   (a) Stem absorbs water and minerals from the soil.
   (b) Leaves hold the plant upright.
   (c) Roots conduct water to the leaves.
   (d) The number of petals and sepals in a flower is always equal.
   (e) If the sepals of a flower are joined together, its petals are also joined together.
   (f) If the petals of a flower are joined together, then the pistil is joined to the petals.
2. Draw
   (a) Leaf
   (b) A taproot
   (c) A flower, you have studied for Table 7.3.
3. Can you find a plant in your house or in your neighborhood, which has a long but a weak stem? Write its name. In which category would you classify it?
4. What is the function of a stem in a plant?
5. Which of the following leaves have reticulate venation?
   Wheat, Tulsi, Maize, Grass, Coriander, China rose.
6. If a plant has fibrous root, what types of veneration do its leaves likely to have?
7. If a plant has leaves with reticulate venation, the kind of roots will it have?
8. Is it possible for you to recognize the leaves without seeing them? How ?
9. Write the name of the parts of flower.
10. Which of the following plants have you seen? Of those that you have seen, which ones have flowers?
    Grass, Maize, Wheat, Chili, Tomato, Tusli, Pipal, Shisham, Banana, Mango, Jamun, Guava, Pomegranate, Papaya, Banana, Lemon, sugarcane, Potato, Groundnut.
11. Name the part of the plant which produces its food. Name this process.
12. In which part of flower you likely to find the ovary?
13. Name two flowers, each with joined and separated sepals.

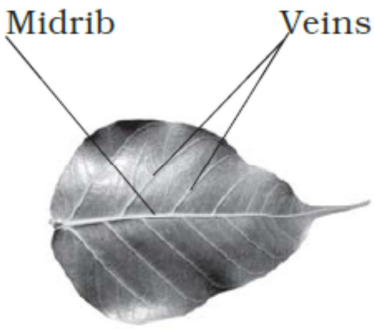
14. Name of plant parts are hidden in this grid. Search for them by going up, down, or even diagonally forward as well as backward. Have fun!

| O | V | U | L | E | L | Y | T | S | T | E | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V | E | I | N | W | Q | H | E | R | B | P | I |
| A | N | I | M | A | L | Z | E | X | R | N | D |
| R | F | I | L | A | M | E | N | T | M | U | R |
| Y | A | R | A | B | L | C | O | D | B | E | I |
| L | E | E | U | O | F | O | L | G | H | I | B |
| A | L | H | I | I | R | J | A | L | K | U | A |
| T | M | T | N | O | U | P | P | Q | R | R | R |
| E | E | N | S | T | I | F | E | H | V | W | N |
| P | Y | A | M | G | T | T | S | Z | Z | N | C |
| F | L | O | W | E | R | E | H | T | N | A | H |
| S | T | A | M | E | N | N | S | E | P | A | L |

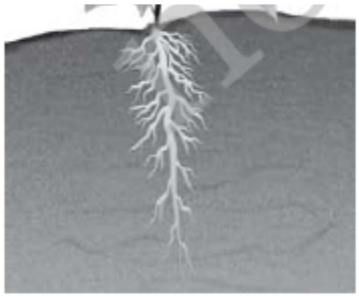
**Class–VI (CHAPTER-07) Getting to Know Plants**

**Answers**

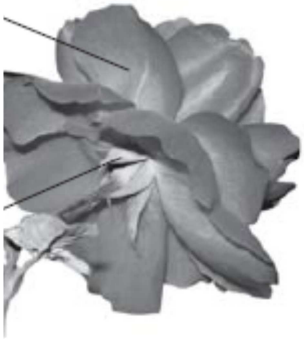
1. The correct statements are
   (a) Roots absorb water and minerals from the soil.
   (b) Stem holds the plant upright.
   (c) Stem conducts water to the leaves.
   (d) The number of petals and sepals in a flower may not be always equal.
   (e) If the sepals of flower are joined together, its petals are separate and not joined together.
   (f) If the petals of a flower are joined together, then the pistil is not necessarily joined to the petal.
2. Leaf




Tap root



Flower



3. Yes, Lauki (guard) plant. It needs support. It is a climber.
4. Function of stem:
   (i) Gives support to plant.
   (ii) Conducts water and minerals from roots to leaves.
   (iii) Conducts food from leaves to other parts of the plant.
5. Tulsi, Coriander, China rose have reticulate venation.
6. Parallel venation.
7. Tap root.
8. Yes, by taking an impression of the leaf. Put paper on the leaf. Hold the pencil tip sideways and rub it on the portion of paper having leaf below. You get impression of leaf with some lines on it. These lines help us to recognize the types of leaf.
9. Parts of flower:
   (i) Sepals
   (ii) Petals
   (iii) Stigma
   (iv) Style
   (v) Anther
   (vi) Androecium
   (vii) Gynoecium
10. I have seen all these plants. Plants with flower are
    Chili
    Tomato
    Tulsi
    Mango

Lemon

Jamun

Guava

Pomegranate

Papaya

Banana

11. Leaves of green plants produce food. The process is called photosynthesis.
12. It is the lowermost and swollen part of the pistil.
13. Joined sepals- Rose, Lotus

    Separate sepals- China rose, mustard flower.
14.

| O | V | U | L | E | L | Y | T | S | T | E | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V | E | I | N | W | Q | H | E | R | B | P | I |
| A | N | I | M | A | L | Z | E | X | R | N | D |
| R | F | I | L | A | M | E | N | T | M | U | R |
| Y | A | R | A | B | L | C | O | D | B | E | I |
| L | E | E | U | O | F | O | L | G | H | I | B |
| A | L | H | I | I | R | J | A | L | K | U | A |
| T | M | T | N | O | U | P | P | Q | R | R | R |
| E | E | N | S | T | I | F | E | H | V | W | N |
| P | Y | A | M | G | T | T | S | Z | Z | N | C |
| F | L | O | W | E | R | E | H | T | N | A | H |
| S | T | A | M | E | N | N | S | E | P | A | L |

Ovule

Filament

Flower

Stamen

Sepal

Midrib

Fruit

Petal

Herb

Ovary

Petal

## Class–VI (CHAPTER-08) BODY MOVEMENTS

### Questions

1. Fill in the blanks:
   (a) Joints of the bones help in the ---------- of the body.
   (b) A combination of bones and cartilages forms the --------- of the body.
   (c) The bones at the elbow are joined by a -------- joint.
   (d) The contraction and of the ---------- pulls the bones during movement.
2. Indicate true (T) and false (F) among the following sentences.
   (a) The movement and locomotion of all animals is exactly the same.
   (b) The cartilages are harder than bones.
   (c) The finger bones do not have joints.
   (d) The fore arm has two bones.
   (e) Cockroaches have an outer skeleton.
3. Match the items in Column I with one or more items of Column II.

| Column I | Column II |
|---|---|
| Upper jaw | have fins on the body. |
| Fish | has an outer skeleton. |
| Ribs | can fly in the air. |
| Snail | is an immovable joint |
| Cockroach | protect the heart. |
| | Shows very slow movement. |
| | Have streamlined body. |

4. Answer the following:
   (a) What is a ball and socket joint?
   (b) Which of the skull bones are movable?
   (c) Why can our elbow not move backwards?

## Class–VI (CHAPTER-08) BODY MOVEMENTS

### Answers

1. Fill in the blanks:
   (a) Joints of the bones help in the **movement** of the body.
   (b) A combination of bones and cartilages forms the **skeleton** of the body.
   (c) The bones at the elbow are joined by **hinge** joint.
   (d) The contraction and of the **muscles** pulls the bones during movement.
2. True/False
   (a) F
   (b) F
   (c) F
   (d) T
   (e) T
3.

| Column I | Column II |
|---|---|
| Upper jaw | Is an immovable joint. |
| Fish | Have fins, have a streamlined body. |
| Ribs | Protect the heart. |
| Snail | Shows very slow movement. |
| Cockroach | Have an outer skeleton, can fly in air. |

4.
   (a) The rounded end of bone fits into the cavity of the other bone. Such a joint allows movements in all directions.
   (b) Lower jaw
   (c) Elbow cannot move backwards because it has hinge joint which allows only back and forth movements.

## Class–VI (CHAPTER-09) THE LIVING ORGANISMS AND THEIR SURROUNDINGS

### Questions

1. What is a habitat?
2. How are cactus adopted to survive in desets?
3. Fill in the blanks:
   (a) The presence of specific features, which enable a plant or animal to live in a particular habitat, is called ----------.
   (b) The habitats of the plants or animals that live on land are called ---------- habitat.
   (c) The habitats of plants and animals that live in water are called ------- habitat.
   (d) Soil, water and air are the ---------- factors of a habitat.
   (e) Changes in our surrounding that make us responds to them, are called ------.
4. Which of the things in the following list are non-living?
   Plough, Mushroom, Sewing machine, Radio, Boat, Water, Hyacinth, Earthworm.
5. Give an example of non-living thing, which shows any two characteristics of living things.
6. Which of the non-living things listed below were once parts of living thing?
   Butter, Leather, Soil, Wool, Cooking gas, Apple, Rubber.
7. List the common characteristic of living things.
8. Explain, why speed is important for survival in the grasslands for animals that live there. (Hint: There are few trees or places for animals to hide in grasslands habitats)

## Class–VI (CHAPTER-09) THE LIVING ORGANISMS AND THEIR SURROUNDINGS

**Answers**

1. The surrounding where plants and animals live, survive and reproduce is called their habitat.
2. Adaptation of cactus in desert:
   (i) The Leaf is modified to spine to reduce transpiration.
   (ii) Photosynthesis is carried by the stems.
   (iii) The stem is covered by thick waxy layer that helps to retain water.
   (iv) Cactus have roots that go very deep into the soil for absorbing water.
3. (a) The presence of specific features, which enable a plant or animal to live in a particular habitat, is called **adaptation**.
   (b)The habitats of the plants or animals that live on land are called **terrestrial** habitat.
   (c) The habitats of plants and animals that live in water are called **aquatic** habitat.
   (d) Soil, water and air are the **abiotic** factors of a habitat.
   (e) Changes in our surrounding that make us responds to them are called **stimuli**.
4. Plough, Sewing machine, Radio, Boat
5. Example- Car
   Two characteristic features-
   (i) Moves
   (ii) Need oxygen
6. Butter, Leather, Wool, Cocking oil, Apple Rubber.
7. Common characteristic of living things.
   (i) Growth
   (ii) Need food
   (iii) Respiration
   (iv) Response to stimuli
   (v) Excretion
   (vi) Reproduction
   (vii) Movement
8. There are few trees for animals to hide. Tiger eats deer. To survive, the deer has to run faster than tiger. Thus speed is important for survival in grassland for animals.

## Class–VI (CHAPTER-10) MOTION AND MEASUREMENT OF DISTANCES

### Questions

1. Give two examples each of modes of transport used on land, water and air.
2. Fill in the blanks:
   (i) One meter is -------- cm.
   (ii) Five kilometer is ---------- m.
   (iii) Motion of a child on a swing is ----------.
   (iv) Motion of the needle of a swing machine is ----------.
   (v) Motion of a wheel of a bicycle is ----------.
3. Why can a pace or footstep not be used as a standard unit of length?
4. Arrange the following lengths in their increasing magnitude.
   1 m, 1 centimeter, 1 kilometer, 1 milimeter.
5. The height of a person is 1.65 m. express it into cm and mm.
6. The distance between Radha's home and her school is 3250 m. express this distance into km.
7. While measuring the length of a knitting needle, the reading of the scale at one end is 3.0 cm and at the other end 33.1 cm. What is the length of the needle?
8. Write the similarities and differences between the motion of a bicycle and ceiling fan that has been switched on.
9. Why could you not use an elastic measuring tape to measure distance? What would be some of the problems you would meet in telling someone about a distance you measured with an elastic tape?
10. Give two examples of periodic motion.

## Class–VI (CHAPTER-10) MOTION AND MEASURMENT OF DISTANCES

## Answers

1. On land: Car, Train
   In water: Boat, Ship
   In air: Aeroplane, Helicopter.
2. Fill in the blanks:
   (vi) One meter is **100** cm.
   (vii) Five kilometer is **5000** m.
   (viii) Motion of a child on a swing is **circular motion**.
   (ix) Motion of the needle of a swing machine is **periodic motion**.
   (x) Motion of a wheel of a bicycle is **circular motion**.
3. We cannot use pace or a footstep as standard unit of length as the size of foot and the footstep will not be the same for every individual. Thus, the measurement will not be same for different people.
4. 1 millimeter, 1 centimeter, 1 meter, 1 kilometer.
5. 1.65 m = 165 cm
   = 1650 mm.
6. 3250 m = 3.25 km.
7. Length of needle = 33.1 cm – 3.0 cm = 30.1 cm.
8. Similarities: - Wheel of a bicycle and ceiling fan both shows circular motion.
   Differences: - Cycle moves in rectilinear motion but ceiling fan does not move in rectilinear motion.
9. Elastic tap will not give accurate measurement because it stretches in length and reduces in size when not stretched. While telling the measurement taken with an elastic tape. We have to tell whether the tape was stretched and by how much. This is very difficult.
10. Example of periodic motion-
    (i) Pendulum
    (ii) Child on the swing.

## Class–VI (CHAPTER-11) LIGHT, SHADOWS AND REFLECTIONS

### Questions

1. Rearrange the boxes given below to make a sentence that help us understand opaque objects.

| | | | | | |
|---|---|---|---|---|---|
| OWS | OPAQ | UE O | BJECT | TSM | SHAD |

2. Classify the objects or materials given below as opaque, transparent or translucent and luminous or non-luminous:
   Air, Water, a piece of rock, a sheet of aluminium, a mirror, as sheet of plane glass, fog, a piece of red hot iron, an umbrella, a lighted fluorescent tube, a wall, a sheet of carbon paper, the flame of a gas burner, a sheet of cardboard, a lighted torch, a sheet of cellophane, a wire mesh, kerosene stove, sun, firefly, moon.
3. Can you think of creating a shape that would give a circular shadow if held in one way and a rectangular shadow if held in another way?
4. In a completely dark room, if you hold up a mirror in front of you, will you see reflection of yourself in the mirror?

## Class–VI (CHAPTER-11) LIGHT, SHADOWS AND REFLECTIONS

**Answers**

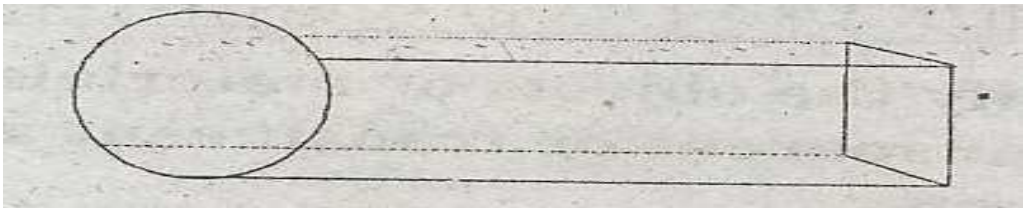
1.

| | | | | | | |
|---|---|---|---|---|---|---|
| OPAQ | UE O | BJEC | T S M | AKE | SHAD | OWS |

2.

| Opaque | Transparent | Translucent | Luminous | Non-luminous |
|---|---|---|---|---|
| A piece of rock | Air | A sheet of polythene | A lightened florescent tube | A mirror |
| A sheet of aluminium | Water | Fog | Flame of gas burner | A piece of rock |
| A CD | A sheet of plane glass | A sheet of cellophane | A lighted torch | A wire mess |
| Smoke | | | Firefly | A piece of rock |
| Iron | | | Stove | Iron |
| An umbrella | | | Sun | A wall |
| A wall | | | Moon | |

3. Yes,



4. In completely dark room, one cannot see any image in the mirror, because there is no light falling on the mirror which can be reflected to show the image.

## Class–VI (CHAPTER-12) ELECTRICITY AND CIRCUITS

**Questions**

1. Fill in the blanks:
   (i) A device that is used to break an electric circuit is called ----------.
   (ii) An electric cell has --------- terminals.
2. Mark 'True' or 'False' for following statements:
   (a) Electric current can flow through metal.
   (b) Instead of metal wires, a jute string can be used to make a circuit.
   (c) Electric current can pass through a sheet of thermocol.
3. Explain why the bulb would not glow in the arrangement show in Fig.

4. Complete the drawing shown in Fig, to indicate where the free ends of the two wires should be joined to make the bulb glow.

5. What is the purpose of using an electric switch? Name some electrical gadgets that have switches built into them.
6. Would the bulb glow after completing the circuit shown in Fig in the Q.4 if instead of safety pin we use an eraser?
7. Would the bulb glow in the circuit shown in Fig.?
8. Using the "conduction tester" on an object it was found that the bulb begins to glow. Is that objected a conductor or an insulator? Explain.
9. Why should an electrician use rubber gloves while repairing an electric switch at your home?
10. The handles of the tools like screwdrivers and pliers used by electrician for repair work usually have plastic or rubber covers on them. Can you explain why?

## Class–VI (CHAPTER-12) ELECTRICITY AND CIRCUITS

**Answers**

1. Fill in the blanks:
   (iii) A device that is used to break an electric circuit is called **switch**.
   (iv) An electric cell has **two** terminals.
2. Mark 'True' or 'False' for following statements:
   (d) Electric current can flow through metal. **True**
   (e) Instead of metal wires, a jute string can be used to make a circuit. **False**
   (f) Electric current can pass through a sheet of Thermocole. **False**
3. The bulb will not glow because the circuit is incomplete due to presence of insulator in between.
4. 
5. Switch is a simple device that is used to either break the electric circuit or to complete it.
   Electric gadgets that have switches built into them are microwaves, freezes, rice cooker, automatic electric iron, toasters etc.
6. No, because eraser is insulator.
7. No.
8. That object is conductor because electricity can pass thorough only a conductor and not through an insulator. Unless the object is conductor, the bulb could not glow.
9. The rubber gloves are insulators. This saves the electrician form getting an electric shock. That is why an electrician uses rubber gloves, while repairing an electric switch.
10. Plastic and rubber, both is bad conductor of electricity. Hence they protect against electric shock.

## Class–VI (CHAPTER-13) FUN WITH MAGNETS

### Questions

1. Fill in the blanks in the following:
   (i) Artificial magnets are made in different shapes such as ------, ------and --------.
   (ii) The materials which are attracted towards a magnet are called ----------.
   (iii) Paper is not a ---------- material.
   (iv) In olden days, sailors used to find direction by suspending a piece of ---------.
   (v) A magnet always has ---------- poles.
2. State whether the following statement are true or false:
   (i) A cylindrical magnet has only one pole. (T/F)
   (ii) Artificial magnets were discovered in Greece. (T/F)
   (iii) Similar poles of a magnet repel each other. (T/F)
   (iv) Maximum iron filings stick in the middle of a bar magnet when it is brought near them. (T/F)
   (v) Bar magnets always point towards North-South direction. (T/F)
   (vi) A compass can be used to find East-West direction any place. (T/F)
   (vii) Rubber is a magnetic material.
3. It is observed that a pencil sharpener gets attracted by both the poles of a magnet although its body is made of plastic. Name the material that might have been used to make some part of it.
4. Column I shows different positions in which one pole of a magnet is placed near that of the other. Column II indicates the resulting action between them for each situation. Fill in the blanks.

| Column I | Column II |
|---|---|
| N-N | |
| N- … | Attraction |
| S-N | |
| …- S | Repulsion |

5. Write any two properties of a magnet.
6. Where are poles of a bar magnet located?
7. A bar magnet has no markings to indicate its poles. How would you find out near which end is its north pole located?
8. You are given an iron strip. How will you make it into a magnet?
9. How is a compass used to find directions?
10. A magnet was brought from different directions towards a toy boat that has been floating in water in a tub. Effect observed in each case is stated in Column I. possible reasons for the observed affects are mentioned in Column II. Match the statements given in Column I with those in Column II.

| Column I | Column II |
|---|---|
| (i) Boat gets attracted towards the magnet. | (a) Boat is fitted with a magnet with North Pole towards its head. |
| (ii) Boat is not affected by the magnet. | (b) Boat is fitted with a magnet with a magnet with South Pole towards its head. |
| (iii) Boat moves towards the magnet if the north pole of the magnet is brought near its head. | (c) Boat has a small magnet fixed along its length. |
| (iv) Boat moves away from the magnet when north pole is brought near its head. | (d) Boat is made of magnetic material. |
| (v) Boat floats without changing its direction. | (e) Boat is made of non-magnetic material. |

## Class–VI (CHAPTER-13) FUN WITH MAGNETS

### Answers

1. Fill in the blanks in the following:
   (i) Artificial magnets are made in different shapes such as bar **magnet, horse shoe** and **cylindrical**.
   (ii) The materials which are attracted towards a magnet are called **magnetic**.
   (iii) Paper is not a **magnetic** material.
   (iv) In olden days, sailors used to find direction by suspending a piece of **magnet**.
   (v) A magnet always has **two** poles.
2. True/False
   (i) F
   (ii) F
   (iii) T
   (iv) F
   (v) T
   (vi) T
   (vii) F.
3. Iron
4.

| Column I | Column II |
|---|---|
| N-N | **Repulsion** |
| N-**S** | Attraction |
| S-N | **Attraction** |
| **S**- S | Repulsion |

5. Properties of magnet:
   (i) Attracts object made of iron, nickel or cobalt.
   (ii) Directs north-south direction.
6. On two ends of the bar magnet.

7. The bar magnet is hanged freely with the help of a thread. The end pointing to north is the north pole of the magnet.

8. An iron strip is kept on table. One end of bar magnet is dragged over the iron strip form one end to the other. This process is repeated. The iron strip is converted to a magnet.

9. The compass always shows North and South directions. Knowing North-South direction, one can always find out East and West directions also.

10. Match the following-

(i) (d)

(ii) (e)

(iii) (b)

(iv) (a)

(v) (c)

## Class–VI (CHAPTER-14) WATER

### Questions

1. Fill up the blanks in the following:
   (a) The process of changing or water into its vapour is called ----------.
   (b) The process of changing water vapour into water is called ----------.
   (c) No rainfall for a year or more may lead to---------- in that region.
   (d) Excessive rains may cause ---------.
2. State for each of the following whether it is due to evaporation or condensation:
   (a) Water drops appear on the outer surface of a glass containing cold water.
   (b) Steam rising from wet clothes while they are ironed.
   (c) Fog appearing on a cold winter morning.
   (d) Blackboard dries up after wiping it.
   (e) Steam rising from a hot girdle when water is sprinkled on it.
3. Which of the following statements are “true”?
   (a) Water vapour is present in air only during the monsoon.
   (b) Water evaporates into air from oceans, rivers and lakes but not form soil.
   (c) The process of water changing into its vapour is called evaporation.
   (d) The evaporation of water takes place only in sunlight.
   (e) Water vapour condenses to form tiny water droplets of water in the upper layers of air where it is cooler.
4. Suppose you want to dry your school uniform quickly. Would spreading it near an anghiti or heater help? If yes how?
5. Take out a cooled bottle of water from refrigerator and keep it on a table. After some time you notice a puddle of water around it. Why?
6. To clean their spectacles, people often breathe out on glasses to make them wet. Explain why the glasses become wet?
7. How are clouds formed?
8. When does a drought occur?

## Class–VI (CHAPTER-14) WATER

### Answers

1. Fill up the blanks in the following:
   (a) The process of changing or water into its vapour is called **evaporation**.
   (b) The process of changing water vapour into water is called **condensation**.
   (c) No rainfall for a year or more may lead to **drought** in that region.
   (d) Excessive rains may cause **drought**.
2. (a) Condensation.
   (b) Evaporation
   (c) Condensation
   (d) Evaporation
   (e) Evaporation
3. (a) F (b) F (c) T (d) F (e) T
4. Spreading it near heater or anghiti will help because due to more heat around, evaporation will be faster.
5. The cold surface of cooled air around it, and the water vapour of the air condenses on the surface of the bottle.
6. The moist air coming out form mouth condenses on glasses to make glasses wet.
7. The process of condensation plays an important role in formation of cloud. As water vapour goes higher from the surface of the earth, it gets cooler. When the air moves up, it gets cooler and cooler. At sufficient heights the air becomes so cool that the water vapour present in it condenses to form tiny water droplets. It is these tiny droplets that remain floating in air and appear to us as clouds.
8. If it does not rain for one or two years, the soil continuous to lose water by evaporation and transpiration. Since, it is not being brought back by rain, the soil becomes dry. The level of water in ponds and wells of the region goes down and some of them may even dry up. The ground water may also become scare. This may lead to drought.

## Class–VI (CHAPTER-15) AIR AROUND US

### Questions

1. What is the composition of air?
2. Which gas in the atmosphere is essential for respiration?
3. How will you prove that air support burning?
4. How will you show that air is dissolved in water?
5. Why does a lump of cotton wool shrink in water?
6. The layer of air around the earth is known as ----------.
7. The component of air used by green plants to make their food, is ----------.
8. List five activities that are possible due to the presence of air.
9. How do plants and animals help each other in exchange of gases in the atmosphere?

## Class–VI (CHAPTER-15) AIR AROUND US

**Answers**

1. Air contains some gases, water vapour and dust particles. The gases in air includes nitrogen, oxygen, small amount of carbon dioxide and many other gases. The gases that make up maximum proportion are nitrogen (78%) and oxygen (21%). Remaining 1% us constituted by carbon dioxide and few other gases, water vapour and dust particles.
2. Oxygen
3. Two lighted candles are taken. One candle is fixed in a tumbler containing water. This candle is covered by an inverted glass. After sometime, the covered candle gets extinguished and water rises up to $1/5^{th}$ in one of the glass. This shows that oxygen is necessary for burning because $1/5^{th}$ is oxygen. The candle was extinguished as soon as all the oxygen was used up.
4. When a tumbler containing water is heated, tiny bubbles appear on the inner side. These bubbles appear before the water starts boiling. So, these must be air bubbles. This shows that water contain air.
5. A lump of cotton wool shrinks in water because the air inside wool cotton is driven out by water. The layers stick together and hence lump shrinks.
6. Atmosphere
7. Carbon dioxide.
8. Activities due to presence of air:
   (i) Winnowing
   (ii) Formation of clouds
   (iii) Respiration
   (iv) Photosynthesis
   (v) Transpiration
   (vi) Flying of birds
9. In photosynthesis, plants take carbon dioxide and give out oxygen. The animals breath in oxygen in respiration and carbon dioxide is given out which is again used by plants for photosynthesis, that is, preparation of food by plants.
   This is how plants and animals help each other in the exchange of gases in the atmosphere.

## Class–VI (CHAPTER-16) GARBAGE IN, GARBAGE OUT

### Questions

1.
   (a) What kind of garbage is not converted into compost by the earthworms?
   (b) Have you seen any other organism besides earthworm, in your pit? If yes, try to find out their names. Draw pictures of these.
2. Discuss:
   (a) Is garbage disposal the responsibility only of the government?
   (b) Is it possible to reduce the problem relating to disposal of garbage?
3.
   (a) What do you do with the leftover food at home?
   (b) If you and your friends are given the choice of eating in a plastic plate or a banana leaf platter at a party, which one would you prefer and why?
4.
   (a) Collect pieces of different kinds of paper. Find out which of these can be recycled.
   (b) With the help of a lens look at the pieces of paper you collected for the above questions. Do you see any difference in the material of recycled paper and a new sheet of paper?
5.
   (a) Collect different kinds of packaging material. What was the purpose of which each one was used? Discuss in groups.
   (b) Give an example in which packaging could have been reduced?
   (c) Write a story on how packaging increases the amount of garbage.
6. Do you think it is a better to use compost instead of chemical fertilizers? Why?

## Class–VI (CHAPTER-16) GARBAGE IN, GARBAGE OUT

**Answers**

1.

(a) Plastic bags, tins, bottles, glass, aluminium foils, broken bangles.

(b) Sometimes we do see smaller insects, bugs, beetles, spiders. There are microorganisms too.

2.

(a) No, it is our responsibility also. We should reduce garbage. We should use and reuse the thing before we throw it.

(b) Yes, it is possible to reduce the problems relating to disposal of garbage by using re-cycle able materials.

3.

(a)

(i) Preserve properly and reuse.

(ii) Convert it to some other food items.

(b) Banana leaf platter, because

(i) Easy to disposal

(ii) Can be recycled

(iii) More environmental-friendly.

4.

(a) Except plastic paper, all other can be recycled.

(b) Recycled paper is thicker and rougher as compared to new sheet of paper.

5.

(a)

| | | |
|---|---|---|
| Paper packet | - | light food items. |
| Card board | - | crockery |
| Plastic covers | - | clothes, dresses. |
| Glass covers | - | show pieces. |
| Wooden boxes | - | delicate items. |

6. Yes, it is better to use compost instead of chemical fertilizers. By using compost, we are re-using our garbage.